REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested.

By this Amendment, claims 1, 8, 9, 23, 26, 31 and 35 are amended, claim 6 is cancelled without prejudice or disclaimer to the subject matter therein. Support for the amendments to the claims can be found throughout the original disclosure. No new matter has been added. Accordingly, after entry of this Amendment, claims 1-5, 8-26, 28, 30-45 and 47 will be pending in the patent application. Since this Amendment is being presented together with a Request for Continued Examination, entry of this Amendment is respectfully requested.

Claims 1-5, 9, 11, 22-24, 28 and 30 were rejected under 35 U.S.C. §103(a) based on U.S. Pub. No. 2002/0105911 to Pruthi *et al.* (hereinafter "Pruthi"), in view of U.S. Pat. No. 6,510,164 to Ramaswamy *et al.* (hereinafter "Ramaswamy"). The rejection is respectfully traversed.

Claims 1, 9 and 23 have been amended to recite the features of claim 6, which are not disclosed by Pruthi or Ramaswamy. Accordingly, for this sole reason, claims 1, 9 and 23 and their dependent claims are patentable over Pruthi, Ramaswamy and any proper combination thereof.

Furthermore, the features of claim 6 have already been searched by the Examiner. Accordingly, should the Examiner withdraw the rejection of claims 1 and 23 based on the combination of Pruthi, Ramaswamy and Ashton in his next communication from the Office, Applicant respectfully requests that claims 1 and 23 be indicated as allowed.

Applicant respectfully submits that the combination of Pruthi, Ramaswamy and Ashton does not disclose, teach or suggest a method of transferring data from a network to a host using a network analyzer card in which the host has a memory including kernel memory space and application memory space, the method comprising, *inter alia*, "transferring the or each data frame and their attached descriptor to the kernel memory space within the host memory and generating offsets such that the data transferred to the kernel space of the host memory is directly accessible to a host application in which offset pointers are stored in the host memory indicative of where corresponding stored data packets start in the host memory," as recited in claim 1.

As noted in Applicant's previous response, Pruthi discloses monitoring data on a communications line and does this essentially by tagging frames. Pruthi does not disclose, teach or suggest using a kernel host memory and indeed would have no need to since Pruthi aims simply to generate statistics dependent on data passing through it.

By contrast, Ramaswamy relates to load balancing in a switch connected to a network and provides means by which packets can be routed to appropriate or desired ports. Ramaswamy discloses sending raw frames without any descriptors and uses kernel host memory space for temporary storage of frames to reduce latency. Ramaswamy describes the use of a buffer pointer list with address point, number of packets and owner. Given that the system of Ramaswamy relates to routing of data in a switch it is counter to its teachings that a skilled person would seek to add a descriptor to data frames passing through as this would increase the overall volume of data flow, which would be undesirable in such an application. Thus, it is entirely counter to the teachings of Pruthi and Ramaswamy that a skilled person would make the combination the examiner is asserting.

The Examiner concedes that neither Pruthi nor Ramaswamy discloses, teaches or suggests the aspects of storing offset pointers in the host memory indicative of where corresponding stored data packets start in the host memory. The Examiner refers to Ashton as allegedly disclosing, teaching or suggesting these aspects of claim 1 (previously recited in claim 6). Applicant respectfully disagrees for at least the following reasons.

First, Applicant respectfully disagrees with the Examiner that "the technical field of Ashton is a subset of the technical field of Pruthi." *See* Office Action at page 4. Indeed, Ashton relates to buffer chaining in a communications controller, which is an entirely different distinct technical field from the fields of both Pruthi and Ramaswamy, as evidenced by their separate classifications.

Second, there is no teaching, suggestion or disclosure in Ashton of the features of claim 6 (now recited in claim 1). The examiner refers to col. 5, line 45 of Ashton as allegedly disclosing, teaching or suggesting these aspects of claim 6. However, col. 5, line 45 of Ashton states:

> In the case of a read operation, the linked list of buffers is established by the CCU 114 and CA 112 administers the transfer of all data in the list in accordance with the invention.

As will be appreciated by one skilled in the art, this is not a disclosure of the feature of claim 6 that offset pointers are stored in the host memory indicative of where corresponding stored data packets start in the host memory. Rather, it is simply a disclosure of a linked list of buffers enabling the transfer of data in the list. As stated at col. 5, lines 14 to 16 of Ashton, each buffer includes a buffer pointer which points to the next buffer on the list for an individual message. It does not relate in any way to the location of corresponding stored data packets and the locations where they start in the host memory. Rather it simply relates to a linked list of buffers as is well known in the art. Indeed, as noted by the Examiner at lines 15 to 17 on page 13 of the Office Action, Ashton teaches storing an indicator to the next *message*. This is not the teaching of an indicator to the location of the next *packet*. Therefore, even if the skilled person were to combine the disclosures of Pruthi, Ramaswamy and Ashton, which pertain to distinct technical fields, he would not arrive at the subject matter of new claim 1.

Claims 2-5 are patentable over Pruthi, Ramaswamy, Ashton and any proper combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 9 is patentable over Pruthi, Ramaswamy, Ashton and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, Applicant respectfully submits that there is no disclosure in Pruthi, Ramaswamy or Ashton of a writer configured to write offset pointers to host memory, the pointers being indicative of where corresponding stored data packets start in the host memory. Thus, for at least the same reasons as given above with respect to claim 1, claim 9 is novel and non-obvious over Pruthi.

Claims 11, 22, 24, 28 and 30 are patentable over Pruthi, Ramaswamy, Ashton and any proper combination thereof at least by virtue of their dependency from claim 9 and for the additional features recited therein.

Claim 23 is patentable over Pruthi, Ramaswamy, Ashton and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-5, 9, 11, 22-24, 28 and 30 under 35 U.S.C. §103(a) based on Pruthi, in view of Ramaswamy are respectfully requested.

Claim 6 was rejected under 35 U.S.C. §103(a) based on Pruthi in view of Ramaswamy, in view of U.S. Pat. No. 5,317,692 to Ashton *et al.* (hereinafter "Ashton"). The rejection is respectfully traversed. Claim 6 has been cancelled without prejudice or disclaimer, thus rendering moot the rejection of this claim.

Claims 8, 10, 12, 14, 26, 31, 33-39 and 47 were rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of U.S. Pat. No. 5,303,347 to Gagne *et al.* (hereinafter "Gagne"). The rejection is respectfully traversed.

In response to Applicant's previous Amendment, the Examiner states

> Although Applicant claims that the "next channel indicator bits of claim 8 [allows navigation] within the host memory without requiring access to any external component such as the 'sequencing ring 80' of Gagne"; such is not required expressly or impliedly by the claim. Rather, the claim merely recites that the addition to the descriptor is "indicative" and "can be used to merge data"; which are both broad and unspecific as to their actual application.
>
> [Office Action, page 4, lines 17-22]

In response, and although Applicant disagrees with the Examiner and believes that previously presented claim 8 was perfectly clear, the claim has nonetheless been further amended to clarify that merged data stream can be directly formed without requiring control or data from a location external to the host memory.

As explained in Applicant's previous Amendment, Gagne relies on *external sequencing rings*. For example, referring to Figure 2 of Gagne, plural receive rings 50, 60 and 70 are provided, each being associated with a set of buffers 20, 30 and 40, respectively. When data is received from the network (device interface) 100 it is routed via a "sequencing ring 80" that contains ring entries and includes ring identifiers 81c and 82c which are fields used to indicate which of the receive rings 50, 60 and 70 contain the ring entry corresponding to the next sequentially received packet. Accordingly, this is very different from the invention of claim 8 which recites that "when stored in an associated host memory said indicators can be used to directly merge data from said first and second channels in a desired order without requiring control or data from a location external to the host memory." Thus, using the "next channel indicator" bits of claim 8, it is possible to navigate within the host memory without requiring access to any external component such as the "sequencing ring

80" of Gagne. Accordingly, claim 8 is both novel and non-obvious over the combination of Pruthi, Ashton and Gagne.

Claims 10, 12 and 14 are patentable over Pruthi, Ashton and Gagne at least by virtue of their dependency from claim 8 and for the additional features recited therein.

Claim 23 is patentable over Pruthi and Ashton for at least similar reasons provided above for claim 1 and for the features recited therein.

Gagne fails to cure the deficiencies of Pruthi and Ashton. Applicant respectfully submits that Gagne does not disclose, teach or suggest a network analyser card for connection to a host computer, the network analyser card comprising, *inter alia*, "an output generator for transferring data frames and attached meta data to a host buffer associated with the host, in dependence on the meta data attached to the data frames in which the output generator is arranged to transfer the data frames and attached meta data to a region of the host buffer that is directly accessible by a host application in which offset pointers are stored in the host buffer indicative of where corresponding stored data packets start in the host buffer." Therefore, claim 23 is novel and non-obvious over the combination of Pruthi, Ashton and Gagne.

Claim 26 recites features that are similar to those of claim 8. Therefore, claim 26 is patentable over Pruthi, Ashton and Gagne for at least similar reasons as provided above for claim 8 and for the features recited therein. For example, the combination of Pruthi, Ashton and Gagne does not disclose, teach or suggest a network analyser card, the card comprising, *inter alia*, "a second descriptor adder configured and arranged to add a descriptor for storage with the respective data frame to at least some of the received data frames from the second channel, the descriptor including data about the data frame to which it is attached for use in processing of the data frame; wherein the first and second descriptor adders are configured and arranged to add an indicator to the data frames received by each of the two receivers to enable merging of data from the channels in an associated host in which the indicator is an indicator of the next channel on which a data frame was received thereby enabling the merged data stream to be generated without requiring control or data from a location external to the host."

Claim 31 is patentable over Pruthi, Ashton and Gagne for at least similar reasons as provided above for claim 9 and for the features recited therein. Claim 31 has been amended to recite that "in dependence only on said information, accessing a subsequent data packet." This corresponds to the amendment made to new claim 9 which requires that merged data

streams can be generated without requiring control or data from a location external to the host memory. As noted above, the combination of Pruthi, Ashton and Gagne does not disclose, teach or suggest these features.

Claims 34 and 47 are patentable over Pruthi, Ashton and Gagne at least by virtue of their dependency from claim 31 and for the additional features recited therein.

Claim 35 recites features that are similar to those of claim 8. Therefore, claim 35 is patentable over Pruthi, Ashton and Gagne for at least similar reasons as provided above for claim 8 and for the features recited therein. For example, the combination of Pruthi, Ashton and Gagne does not disclose, teach or suggest "in dependence on the indicator, reading from another region of the host memory data of a data packet from the next channel thereby enabling the merged data stream to be generated without requiring control or data from a location external to the host."

Claims 36-38 are patentable over the combination of Pruthi, Ashton, Gagne and any combination thereof at least by virtue of their dependency from claim 35 and for the additional features recited therein.

With respect to claim 39, and in response to Applicant's previous Amendment, the Examiner asserts that "it is not stated what the offset is relative to." See Office Action, page 7, lines 8-9. Moreover, the Examiner asserts that "any pointer in memory may fairly be considered an offset which is relative to some memory address." Id. Applicant respectfully disagrees.

None of the cited references disclose, teach or suggest "generating an offset *indicative of the location within the memory of a subsequent data packet.*" Emphasis added. Contrary to the Examiner's contention, the offset recited in claim 39 is not any type of offset. Rather, the offset of claim 39 has the attribute of being indicative of the location within the memory of a subsequent data packet. Applicant respectfully submits that the "next message pointer" of Ashton is with respect to the "next message". The next message pointer of Ashton is no way "*indicative of the location within the memory of a subsequent data packet.*" Accordingly, the pointer of Ashton cannot possibly correspond to the claimed offset. Therefore, for at least this reason, claim 39 is patentable over Pruthi, Ashton, Gagne and any proper combination thereof.

Accordingly, reconsideration and withdrawal of the rejection of claims 8, 10, 12, 14, 26, 31, 33-39 and 47 under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne are respectfully requested.

Claim 32 was rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of U.S. Pat. No. 5,497,404 to Grover *et al.* (hereinafter "Grover"). The rejection is respectfully traversed.

Claim 32 is patentable over Pruthi, Ashton, Gagne and any proper combination thereof at least by virtue of its dependency from claim 31 and for the additional features recited therein.

Grover fails to cure the deficiencies of Pruthi, Ashton and Gagne. Grover is silent as to a method of navigating through a memory in which data packets are stored, at least some of the data packets including a descriptor containing information about the data packet with which it is associated, the method comprising: reading the descriptor of a first data packet to obtain information about the first data packet; and, in dependence only on said information, accessing a subsequent data packet. Therefore, claim 32 is novel and non-obvious over the combination of Pruthi, Ashton, Gagne and Grover.

Accordingly, reconsideration and withdrawal of the rejection of claim 32 under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Grover are respectfully requested.

Claim 13 was rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Tcl Clock, 1996 ("Tcl Clock"), retrieved from the internet <url:http://www.astro.princeton.edu/%7Erhl/Tcl-Tk_docs/tcl/clock.n.html>. The rejection is respectfully traversed.

Claim 13 is patentable over Pruthi, Ashton, Gagne and any proper combination thereof at least by virtue of its dependency from claim 8 and for the additional features recited therein.

Tcl Clock fails to remedy the deficiencies of Pruthi, Ashton and Gagne. Tcl Clock is silent as to a method of transferring multi-channel data received from a network to a host using a network analyzer card, the network analyzer card comprising: a receiver for receiving plural data frames from a network link on a first channel and a receiver for receiving plural data frames from the network link on a second channel; a descriptor adder configured and arranged to add a descriptor to at least some of the data frames received on the first channel and a descriptor adder configured and arranged to add a descriptor to at least some of the data frames received on the second channel, the descriptors including data about

the data frame to which it is attached, the method comprising: receiving data from first and second channels on the receivers of the network analyser card; and, adding an indicator in the descriptor associated with received data frames indicative of the next channel on which a data frame was received, storing the data frames with the associated descriptor, whereby when stored in an associated host memory said indicators can be used to directly merge data from said first and second channels in a desired order without requiring control or data from a location external to the host memory. Therefore, claim 13 is novel and non-obvious over the combination of Pruthi, Ashton, Gagne and Tcl Clock.

Accordingly, reconsideration and withdrawal of the rejection of claim 13 under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Tci Clock are respectfully requested.

Claims 15 and 16 were rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of U.S. Pat. No. 4,228,496 to Katzman *et al.* (hereinafter "Katzman"). The rejection is respectfully traversed.

Claims 15 and 16 are patentable over Pruthi, Ashton, Gagne and any proper combination thereof at least by virtue of their dependencies from claim 8 and for the additional features recited therein.

Katzman does not remedy the deficiencies of Pruthi, Ashton and Gagne. Katzman is silent as to a method of transferring multi-channel data received from a network to a host using a network analyzer card, the network analyzer card comprising: a receiver for receiving plural data frames from a network link on a first channel and a receiver for receiving plural data frames from the network link on a second channel; a descriptor adder configured and arranged to add a descriptor to at least some of the data frames received on the first channel and a descriptor adder configured and arranged to add a descriptor to at least some of the data frames received on the second channel, the descriptors including data about the data frame to which it is attached, the method comprising: receiving data from first and second channels on the receivers of the network analyser card; and, adding an indicator in the descriptor associated with received data frames indicative of the next channel on which a data frame was received, storing the data frames with the associated descriptor, whereby when stored in an associated host memory said indicators can be used to directly merge data from said first and second channels in a desired order without requiring control or data from a

location external to the host memory. Therefore, claims 15 and 16 are novel and non-obvious over the combination of Pruthi, Ashton, Gagne and Katzman.

Accordingly, reconsideration and withdrawal of the rejection of claims 15 and 16 under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Katzman are respectfully requested.

Claims 17, 18 and 19 were rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Katzman, in view of U.S. Pat. No. 5,859,846 to Kim *et al.* (hereinafter "Kim"). The rejection is respectfully traversed.

Claims 17, 18 and 19 are patentable over Pruthi, Ashton, Gagne, Katzman and any proper combination thereof at least by virtue of their dependencies from claim 8 and for the additional features recited therein.

Kim does not remedy the deficiencies of Pruthi, Ashton, Gagne and Katzman. For example, Kim does not disclose, teach or suggest the features of claim 8. Therefore, claims 17, 18 and 19 are novel and non-obvious over the combination of Pruthi, Ashton, Gagne, Katzman and Kim.

Accordingly, reconsideration and withdrawal of the rejection of claims 17, 18 and 19 under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Katzman, in view of Kim are respectfully requested.

Claims 20 and 21 were rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Katzman, in view of U.S. Pat. No. 4,769,810 to Eckberg *et al.* (hereinafter "Eckberg"). The rejection is respectfully traversed.

Claims 20 and 21 are patentable over Pruthi, Ashton, Gagne, Katzman and any proper combination thereof at least by virtue of their dependencies from claim 8 and for the additional features recited therein.

Eckberg does not remedy the deficiencies of Pruthi, Ashton, Gagne and Katzman. For example, Eckberg does not disclose, teach or suggest the features of claim 8. Therefore, claims 20 and 21 are novel and non-obvious over the combination of Pruthi, Ashton, Gagne, Katzman and Eckberg.

Accordingly, reconsideration and withdrawal of the rejection of claims 20 and 21 under 35 U.S.C. §103(a) based on Pruthi, in view of Ashton, in view of Gagne in view of Katzman, in view of Eckberg are respectfully requested.

Claim 25 was rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ramaswamy, in view of U.S. Pat. No. 6,721,872 to Dunlop *et al.* (hereinafter "Dunlop"). The rejection is respectfully traversed.

Claim 25 is patentable over Pruthi at least by virtue of its dependency from claim 23 and for the additional features recited therein.

Dunlop does not remedy the deficiencies of Pruthi. For example, Dunlop is silent as to a network analyser card for connection to a host computer, the network analyser card comprising, *inter alia*, "an output generator for transferring data frames and attached meta data to a host buffer associated with the host, in dependence on the meta data attached to the data frames in which the output generator is arranged to transfer the data frames and attached meta data to a region of the host buffer that is directly accessible by a host application." Therefore, claim 25 is novel and non-obvious over the combination of Pruthi and Dunlop.

Accordingly, reconsideration and withdrawal of the rejection of claim 25 under 35 U.S.C. §103(a) based on Pruthi, in view of Ramaswamy, in view of Dunlop are respectfully requested.

Claims 40-45 were rejected under 35 U.S.C. §103(a) based on Pruthi, in view of Ramaswamy, in view of Eckberg. The rejection is respectfully traversed.

Claims 40-45 are patentable over Pruthi at least by virtue of their dependency from claim 9 and for the features recited therein.

Eckberg does not remedy the deficiencies of Pruthi. Eckberg is silent as to a network analyser card, the card comprising: a receiver for receiving plural data frames from a network link; and, a descriptor adder configured and arranged to add a descriptor to at least some of the received data frames, the descriptor including data about the data frame to which it is attached for use in processing of the data frame, and a writer, to write data frames received from the network links to a region of kernel memory of an associated host memory which region is directly accessible to a host application. Therefore, claims 40 and 41-45 are novel and non-obvious over the combination of Pruthi and Eckberg.

Accordingly, reconsideration and withdrawal of the rejection of claims 40 and 42-46 under 35 U.S.C. §103(a) based on Pruthi, in view of Ramaswamy, in view of Eckberg are respectfully requested.

Applicant has addressed the Examiner's rejections and objection and respectfully submits that the application is in condition for allowance. A notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

CHRISTOPHE F. LAIR
Reg. No. 54248
Tel. No. 703.770.7797
Fax No. 703.770.7901

July 14, 2011

JSB/CFL
P.O. Box 10500
McLean, VA 22102
(703) 770-7900